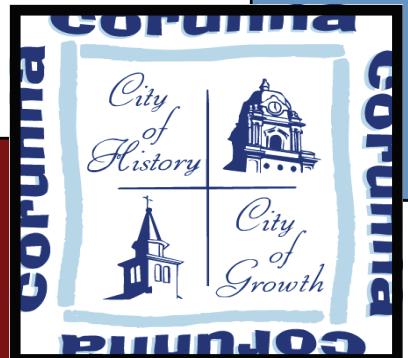


HYDRO-DESIGNS, INCORPORATED MISSION STATEMENT

Hydro-Designs, Inc. provides Cross Connection Control, Plumbing, Environmental, and Field Services to our clients in order to ensure safe drinking water, compliance with governing laws, and to assist in efficiently developing and monitoring these programs. HDI is the national leader in the provision of complete Cross Connection Control Programs. The corporation makes these services available to clients, associations, and others concerned with the maintenance of the potability of the drinking water.

HDI will provide the highest quality and most cost efficient services on a timely basis to assist our industrial, commercial, and governing authority clients with meeting their program requirements. HDI will develop and maintain its market leadership position on an international basis in order to continue needed and wanted client services.



Hydro-Designs, Inc. has been hired to provide the cross connection program for the City of Corunna. Any questions concerning cross connection control and backflow prevention may be directed to the City of Corunna, Department of Public Works at (517) 743-3650, to the Michigan Department of Environmental Quality (DEQ), Water Supply at (517) 335-9216 or the Michigan Department of Labor, Plumbing Division at (517) 322-1804.

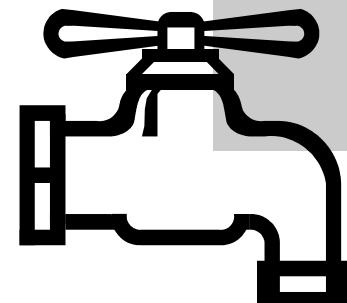
Compliments of THE CITY OF CORUNNA

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THE CITY OF CORUNNA

**Cross Connections
IT'S YOUR
RESPONSIBILITY
TOO!**



**"What Do You Mean I Might Be
Contaminating the Water?"**

CROSS CONNECTION? WHAT'S THAT?

Did you know that you can pollute your own drinking water without even realizing it? It's true! Elimination of cross connections will help protect the water we drink. The Safe Drinking Water Act of 1974 established national standards for drinking water. The State and Local Governments are responsible for the enforcement of these standards, and the supervision of the public water supply. It is the responsibility of local government to deliver safe drinking water to your tap.

A cross connection is a direct or potential arrangement

What is a cross connection?

of drinking water piping that is or can be connected to a questionable source. An example is the common garden hose attached to a sill cock with the end of the hose lying in a cesspool or submerged in a tub full of detergent. Other examples are supply lines connected to boilers, process equipment, or bottom-fed tanks.

What is back-siphonage?

Back-siphonage is the reversal of normal flow in a system caused by a negative pressure (vacuum or partial vacuum) in the supply piping.

Back-siphonage can be created when there is stoppage of the water supply due to repairs or breaks in the city

What factors can cause back-siphonage?

main, or increased demand at a location such as fire fighting.

Backpressure backflow is the reversal of normal flow in the system due to downstream pressure being

What is backpressure backflow?

greater than the supply pressure.



What factors can cause a backpressure-backflow condition?

Backpressure backflow can occur at any pressurized system such as boilers, elevated tanks, or re-circulating systems. For example, a boiler operating under 15-20 lbs. pressure would backflow into the potable water anytime the supply is below 15-20 lbs. Sometimes all this requires is the flushing of a toilet!

What is a cross connection control program?

This is a combined cooperative effort between plumbing and health officials, municipalities, and property owners to establish and administer guidelines for controlling cross connections and implementing means to ensure their enforcement so that the public drinking water supply will be protected both in the city main and within buildings.

Ironically, the ordinary garden hose is the most com-

What is the most common form of a cross connection?

mon offender, as it can be easily connected to the drinking water supply and used for a variety of potentially dangerous applications.

Pollution of the water supply does not constitute an

What is the difference between pollution and contamination?

actual health hazard, although the quality of the water is impaired with respect to taste, odor or utility. Contamination of the water supply, however, does constitute an actual health hazard; the consumer being subjected to potentially lethal water borne disease or illness.

What is the difference between a toxic and a non-toxic substance?

A toxic substance is any liquid, solid, or gas which when introduced into the water supply creates, or may create a danger to the health and well being of the

consumer. An example is treated boiler water. A non-toxic substance is any substance that may create a non-health hazard, is a nuisance, or is aesthetically objectionable. Non-toxic substances pollute potable water supplies. Toxic substances contaminate the potable water. Therefore, you must select the proper device according to the type of connection and degree of hazard. There are five basic products that can be used to correct cross connection.

What is meant by "Degree of Hazard"?

The degree of hazard is a commonly used phrase utilized in cross connection programs and is simply a determination on whether the substance in the non-potable system is toxic (health hazard) or non-toxic (non-health hazard).

What are the five basic methods of protection against cross connections?

- 1) Air Gap
- 2) Atmospheric Vacuum Breakers—which also includes Hose Connection Vacuum Breakers
- 3) Pressure Type Vacuum Breakers
- 4) Double Check Valve Assembly
- 5) Reduced Pressure Principle Backflow Preventers

Yes, The State of Michigan Department of Public

Are there any regulations?

Health, Administrative Rules for Michigan's Safe Drinking Water ACT, Act 399, P.A. 1976, Part 14 Cross Connection, R 325.11404. Local Cross Connection Programs Rule 1404. MIOSHA Health Rule Sanitation Standard 4201, Chapter IV General Work Place Requirements, Part II Sanitation Section 2.

OSHA requires that no cross connection be allowed in an installation unless it is properly protected with an approved backflow preventer. These requirements are also covered in BOCA, Southern Std. Building Code, Uniform Plumbing Code, and City, State and Federal Regulations.